

2. The lamphead of claim 1, further comprising:
a plurality of coolant passages formed in the monolithic member.
3. The lamphead of claim 1, wherein the monolithic member comprises at least one of copper and aluminum.
4. The lamphead of claim 1, further comprising:
a reflective coating upon a surface of each reflector cavity.
5. The lamphead of claim 4, wherein the reflective coating comprises at least one of gold and a dielectric stack on a gold layer.

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6. The lamphead of claim 1, further comprising:
a plurality of lead passages formed in the monolithic member, each lead passage extending between one of the plurality of the lamp receptacles and one of the plurality of the reflector cavities, and adapted to receive a portion of a lamp.
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BS 7. The lamphead of claim 1, further comprising:
at least one lampholder having receptacles for the outer leads of a lamp;
a ferrofluid; and
one or more magnets disposed about the lampholder and maintaining the position of the ferrofluid near the receptacles;
such that when the outer leads of a lamp are inserted into the lampholder receptacles, the ferrofluid surrounds the outer leads thereby suppressing arcing between the outer leads.
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8. The lamphead of claim 7, wherein:
the outer leads of the lamp are magnetic, such that the magnets maintain the position of the lamp.
9. A semiconductor processing system, comprising:

a process chamber having a support on which a substrate may be positioned during processing; and

a monolithic lamphead having a plurality of lamp receptacles and reflector cavities formed therein, each lamp receptacle adapted to support a lamp and each reflector cavity shaped such that the lamps direct radiant energy onto a substrate on the support.

10. A semiconductor processing system of claim 9, further comprising:
a plurality of coolant passages formed in the monolithic lamphead near the reflector cavities.

11. The semiconductor processing system of claim 9, further comprising:
a reflective coating upon a surface of each reflector cavity.

12. The semiconductor processing system of claim 9, further comprising:
a plurality of lead passages formed in the monolithic lamphead, each lead passage in communication with one of the plurality of the lamp receptacles and adapted to receive a lamp seal.

13. The semiconductor processing system of claim 9, further comprising:
at least one lampholder having receptacles for the outer leads of a lamp;
a ferrofluid; and
one or more magnets disposed about the lampholder and maintaining the position of the ferrofluid near the receptacles;
such that when the outer leads of a lamp are inserted into the lampholder receptacles, the ferrofluid surrounds the outer leads thereby suppressing arcing between the outer leads.

14. The semiconductor processing system of claim 13, wherein:
the outer leads of the lamp are magnetic, such that the magnets maintain the position of the lamp.

15. An apparatus for processing a substrate, comprising:

a process chamber having a support on which a substrate may be positioned during processing; and

a monolithic lamphead having a plurality of lamp receptacles and reflector cavities formed therein, each lamp receptacle adapted to support a lamp and the reflector cavities shaped such that the lamps direct radiant energy onto a substrate on the support.

16. The apparatus of claim 15, further comprising:
a plurality of coolant passages formed in the monolithic lamphead.

17. The apparatus of claim 15, further comprising:
a reflective coating upon a surface of each reflecting cavity.

18. The apparatus of claim 15, further comprising:
a plurality of lead passages formed into the monolithic lamphead, each lead passage in communication with one of the plurality of the lamp receptacles and adapted to receive a lamp seal.

19. The apparatus of claim 15, further comprising:
at least one lampholder having receptacles for the outer leads of a lamp;
a ferrofluid; and
one or more magnets disposed about the lampholder and maintaining the position of the ferrofluid near the receptacles;
such that when the outer leads of a lamp are inserted into the lampholder receptacles, the ferrofluid surrounds the outer leads thereby suppressing arcing between the outer leads.

20. The apparatus of claim 19, wherein:
the outer leads of the lamp are magnetic, such that the magnets maintain the position of the lamp.